



**UNITED STATES DEPARTMENT OF COMMERCE  
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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
08/117,363	09/03/93	COOK	F ISIS1169

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18N2/0610

EXAMINER

HOUTTEMAN, S

ART UNIT

PAPER NUMBER

1809

DATE MAILED: 06/10/97

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

# Office Action Summary

Application No.  
**08/117,363**

Applicant(s)  
**Cook et al.**

Examiner  
**Scott W. Houtteman**

Group Art Unit  
**1809**



☒ Responsive to communication(s) filed on Mar 17, 1997

☐ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire three month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

## Disposition of Claims

☒ Claim(s) 1-29 is/are pending in the application.

Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

☐ Claim(s) \_\_\_\_\_ is/are allowed.

☒ Claim(s) 1-29 is/are rejected.

☐ Claim(s) \_\_\_\_\_ is/are objected to.

☐ Claims \_\_\_\_\_ are subject to restriction or election requirement.

## Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on \_\_\_\_\_ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some\* ☐ None of the CERTIFIED copies of the priority documents have been

☐ received.

☐ received in Application No. (Series Code/Serial Number) \_\_\_\_\_

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\*Certified copies not received: \_\_\_\_\_

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

## Attachment(s)

☐ Notice of References Cited, PTO-892

☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). \_\_\_\_\_

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

} Filed 4-1-96  
3-30-95

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

1. Applicant's response, filed 3/17/97, has been carefully considered with the following effect:

The rejections of paragraph 4 and 5, Office action mailed 12/13/96, have been withdrawn in view of applicant's amendments.

The rejection of paragraphs 7 and 8, Office action mailed 12/13/96, has been withdrawn in view of the new grounds of rejections set fourth in this Office action.

The rejection of paragraphs 7 and 8, Office action mailed 12/13/96, has been withdrawn in view of the new grounds of rejections set fourth in this Office action.

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. The non-statutory double patenting rejection, whether of the obviousness-type or non-obviousness-type, is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent. *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); and *In re Goodman*, 29 USPQ2d 2010 (Fed. Cir. 1993).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(b) and © may be used to overcome an actual or provisional rejection based on a non-statutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.78(d).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

4. Claims 1-19 are provisionally rejected under the judicially created doctrine of double patenting over claims 1-29 of copending Application No. 08/464,953. This is a provisional double patenting rejection since the conflicting claims have not yet been patented.

The subject matter claimed in the instant application is fully disclosed in the referenced copending application and would be covered by any patent granted on that copending application since the referenced copending application and the instant application are claiming common subject matter. The only difference between the two sets of claims is that the claims of the current case have been amended to include "a folate" in the R<sub>2</sub> Markush group.

Furthermore, there is no apparent reason why applicant would be prevented from presenting claims corresponding to those of the instant application in the other copending application. *In re Schneller*, 397 F.2d 350, 158 USPQ 210 (CCPA 1968). See also MPEP § 804.

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, 7, 13, 16, 17, 21 and 27 are rejected under 35 U.S.C. 102(b) as being anticipated by Manoharan et al., Tetrahedron Letters, 32(49):7171-7174, 1991 (Manoharan).

Manoharan teaches the claimed compounds and nucleotides for example on page 7172, Oligodeoxynucleotide II and Scheme 2.

6. Claims 1-4, 6-18 and 20-29 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Urdea et al., US Pat. 4,910,300, 3/1990 (Urdea) in view of Carico, US Pat. 4,743,535, 5/1980, Matteucci et al. WO 92/05186, 4/92 (Matteucci) and Latham et al., WO 91/14696, 10/91 (Latham).

Claims 1 and 16 are drawn to compounds and nucleosides comprising a ribofuranosyl sugar bearing at a 2', 3' or 5'-O-position, a substituent having the formula, for example alkyl-NH<sub>2</sub>-.

Urdea et al. teaches a 5'-O-position having an R1 substituent (see Urdea bottom of col 10). R1 is defined at col. 4, line 4 as an amine. Matteucci discloses the claimed "O-C-N" chain (see Matteucci p. 16 lines 30-35) as well as numerous other internucleotide linkages (see Matteucci page 13, line 2 to page 20 line 30, for example).

The claims differ from Matteucci in the recitation of terminal linkages. Latham teaches that internucleotide linkages and terminal linkages are art recognized alternatives (see for example Latham page 18, lines 3-17). Latham also teaches the attachment of linkages at the 2' position of the sugar.

It would have been *prima facie* obvious to one of ordinary skill in the art at the time the invention was made to combine the prior art teachings nucleotide linkages because, lacking a showing of criticality, or other secondary consideration, the claimed alkyl chain is considered one of several alternative linkages, any one of which the art skilled would reasonably expect to function in the claimed invention. Furthermore, Carico discloses that the non-critical nature of

the various 5' substitutions used for tethering labels to a nucleic acid. Carico discloses, for example at col. 7, lines 15 and 22, that R1 is "a bond or a chain."

7. Claims 5 and 19 are rejected under 35 U.S.C. § 103 as being unpatentable over Urdea, Carico, Matteucci and Latham as used above, and further in view of applicants admissions.

Claims 5 and 19 further limit there respective base claims to recite a "phthalimido" side group. Applicant admits that this is known in the art at page 12, lines 6-14 of the specification as a protecting group. It would have been *prima facie* obvious to one of ordinary skill in the art at the time the invention was made to use phthalimido group to protect the amine groups during the organic synthesis process.

8. Claims 3-6, 8-12, 14, 15, 18-20, 22-26, 28 and 29 are rejected under 35 U.S.C. § 103 as being unpatentable over Urdea, Carico, Matteucci, Latham, Manoharan and applicants admissions. This rejection is identical to the two rejections above except that the Manoharan reference is used to supply the teachings of a 2' attachment site and of the five carbon chain between the oxygen and nitrogen chain atoms.

9. Papers relating to this application may be submitted to Group 1800 by facsimile transmission. Papers should be faxed to Art Unit 1809. The faxing of such papers must conform with the notice published in the Official Gazette, 1096 OG 30 (November 15, 1989). The Art Unit 1809 Fax number is (703) 305-7401.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Scott Houtteman whose telephone number is (703) 308-3885. The

Serial No. 08/117,363  
Art Unit 1809

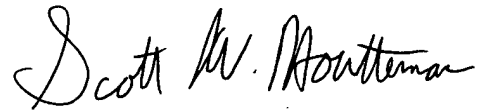
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examiner can normally be reached on Tuesday-Friday from 8:30 AM - 6:00 PM. The examiner can also be reached on alternate Mondays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, W. Gary Jones, can be reached at (703) 308-1152.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0196.

Scott Houtteman  
June 8, 1997

A handwritten signature in cursive script that reads "Scott W. Houtteman".

**SCOTT W. HOUTTEMAN  
PRIMARY EXAMINER  
GROUP 1800**